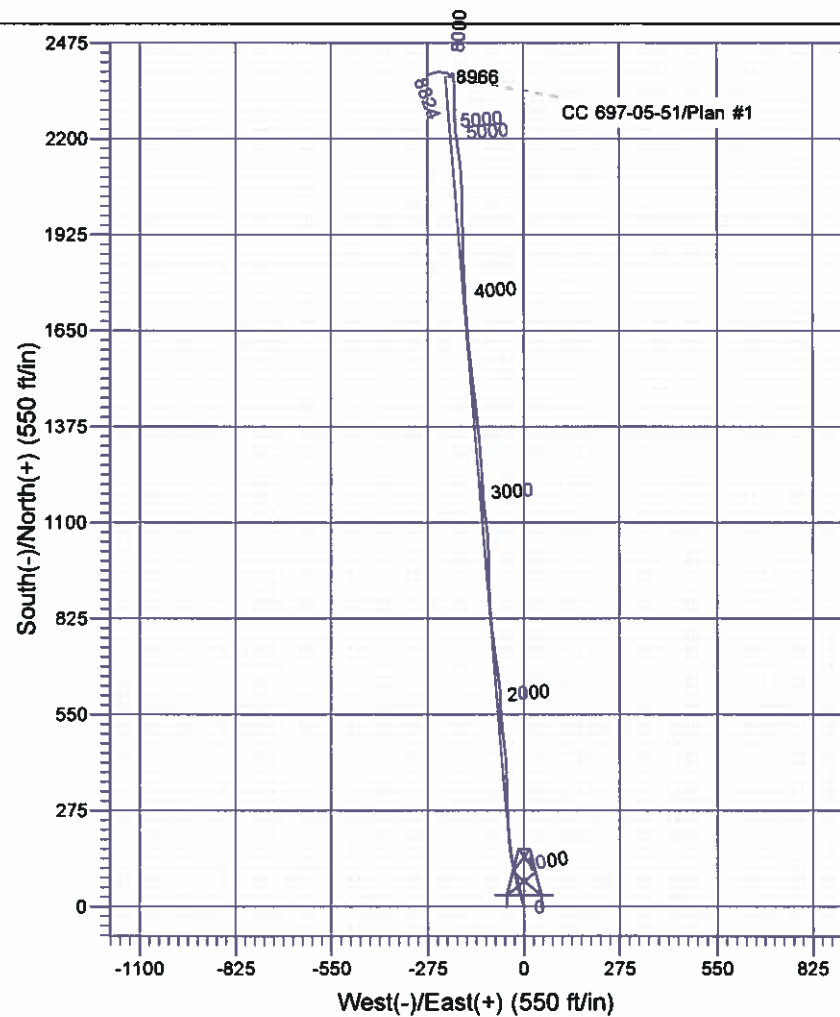
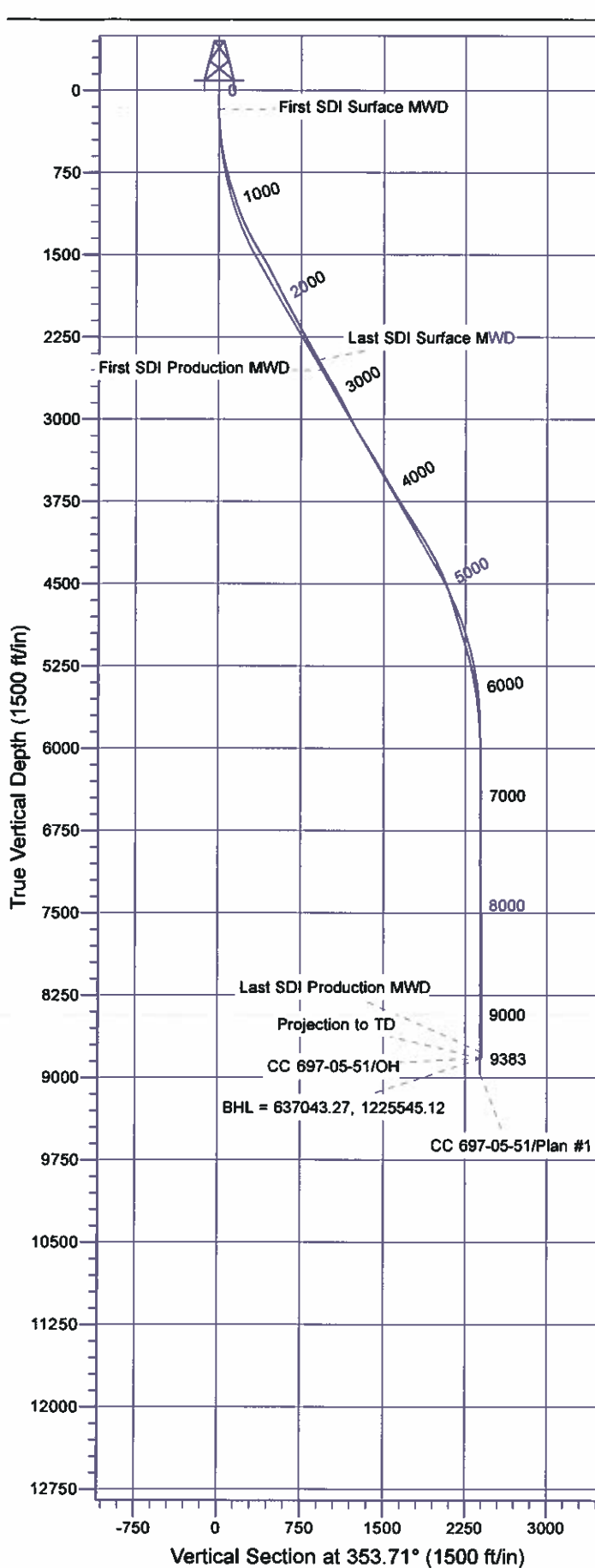




# Scientific Drilling

Company: OXY USA RMAI  
 Project: Garfield County, CO NAD27  
 Site: Cascade Creek 697-08A Pad  
 Well: CC 697-05-51  
 Wellbore: OH  
 Design: OH



## Well Details: CC 697-05-51

| +N/-S | +E/-W | North     | East       | Latitude         | Longitude         | Slot |
|-------|-------|-----------|------------|------------------|-------------------|------|
| 0.00  | 0.00  | 634653.36 | 1225749.00 | 39° 32' 37.745 N | 108° 14' 44.997 W | A    |

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well CC 697-05-51 - Slot A, True North  
 Vertical (TVD) Reference: GL 8401' & RKB 30' @ 8431.00ft (H&P Rig)  
 Section (VS) Reference: Slot - A(0.00N, 0.00E)  
 Measured Depth Reference: GL 8401' & RKB 30' @ 8431.00ft (H&P Rig)  
 Calculation Method: Minimum Curvature

## PROJECT DETAILS: Garfield County, CO NAD27

Geodetic System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: Colorado Central 502

System Datum: Mean Sea Level

Plan: OH

9:36, June 19 2012  
 Created By: Janie Collins

# **OXY USA RMAT**

**Garfield County, CO NAD27  
Cascade Creek 697-08A Pad  
CC 697-05-51 - Slot A**

**OH**

**Design: OH**

## **Standard Survey Report**

**19 June, 2012**

# Scientific Drilling International

## Survey Report

|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-05-51 - Slot A               |
| <b>Project:</b>  | Garfield County, CO NAD27 | <b>TVD Reference:</b>               | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Site:</b>     | Cascade Creek 697-08A Pad | <b>MD Reference:</b>                | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Well:</b>     | CC 697-05-51              | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | OH                        | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                        | <b>Database:</b>                    | Rockies Compass Server                   |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Garfield County, CO NAD27            |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | Colorado Central 502                 |                      |                |

|                       |   |              |                   |                   |                   |
|-----------------------|---|--------------|-------------------|-------------------|-------------------|
| Site                  | Cascade Creek 697-08A Pad, Sec 8 T6S R97W |              |                   |                   |                   |
| Site Position:        |   | Northing:    | 635,765.16 usft   | Latitude:         | 39° 32' 48.728 N  |
| From:                 | Lat/Long                                  | Easting:     | 1,225,748.33 usft | Longitude:        | 108° 14' 45.434 W |
| Position Uncertainty: | 0.00 ft                                   | Slot Radius: | 13.200 in         | Grid Convergence: | -1.73 °           |

|                      |                       |         |                     |                   |               |                   |
|----------------------|-----------------------|---------|---------------------|-------------------|---------------|-------------------|
| Well                 | CC 697-05-51 - Slot A |         |                     |                   |               |                   |
| Well Position        | +N/-S                 | 0.00 ft | Northing:           | 634,653.36 usft   | Latitude:     | 39° 32' 37.745 N  |
|                      | +E/-W                 | 0.00 ft | Easting:            | 1,225,748.99 usft | Longitude:    | 108° 14' 44.997 W |
| Position Uncertainty |                       | 0.00 ft | Wellhead Elevation: | ft                | Ground Level: | 8,401.00 ft       |

|                  |                   |                    |                            |                          |                                |
|------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------|
| <b>Wellbore</b>  | OH                |                    |                            |                          |                                |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination<br/>(°)</b> | <b>Dip Angle<br/>(°)</b> | <b>Field Strength<br/>(nT)</b> |
|                  | IGRF2010          | 2011/05/24         | 10.48                      | 65.73                    | 52,230                         |

|                          |                                  |                       |                       |                          |        |
|--------------------------|----------------------------------|-----------------------|-----------------------|--------------------------|--------|
| <b>Design</b>            | OH                               |                       |                       |                          |        |
| <b>Audit Notes:</b>      |                                  |                       |                       |                          |        |
| <b>Version:</b>          | 1.0                              | <b>Phase:</b>         | ACTUAL                | <b>Tie On Depth:</b>     | 0.00   |
| <b>Vertical Section:</b> | <b>Depth From (TVD)<br/>(ft)</b> | <b>+N/-S<br/>(ft)</b> | <b>+E/-W<br/>(ft)</b> | <b>Direction<br/>(°)</b> |        |
|                          | 0.00                             | 0.00                  | 0.00                  |                          | 353.71 |

|                       |                    |                                 |                  |                       |  |
|-----------------------|--------------------|---------------------------------|------------------|-----------------------|--|
| <b>Survey Program</b> | <b>Date</b>        | 2012/06/19                      |                  |                       |  |
| <b>From<br/>(ft)</b>  | <b>To<br/>(ft)</b> | <b>Survey (Wellbore)</b>        | <b>Tool Name</b> | <b>Description</b>    |  |
| 174.00                | 2,663.00           | Survey #1 - Surface MWD (OH)    | MWD-SDI          | MWD - Standard ISCWSA |  |
| 2,771.00              | 9,383.00           | Survey #2 - Production MWD (OH) | MWD-SDI          | MWD - Standard ISCWSA |  |

|                                    |                            |                        |                                    |                       |                       |                                      |                                      |                                     |                                    |
|------------------------------------|----------------------------|------------------------|------------------------------------|-----------------------|-----------------------|--------------------------------------|--------------------------------------|-------------------------------------|------------------------------------|
| <b>Survey</b>                      |                            |                        |                                    |                       |                       |                                      |                                      |                                     |                                    |
| <b>Measured<br/>Depth<br/>(ft)</b> | <b>Inclination<br/>(°)</b> | <b>Azimuth<br/>(°)</b> | <b>Vertical<br/>Depth<br/>(ft)</b> | <b>+N/-S<br/>(ft)</b> | <b>+E/-W<br/>(ft)</b> | <b>Vertical<br/>Section<br/>(ft)</b> | <b>Dogleg<br/>Rate<br/>(°/100ft)</b> | <b>Build<br/>Rate<br/>(°/100ft)</b> | <b>Turn<br/>Rate<br/>(°/100ft)</b> |
| 0.00                               | 0.00                       | 0.00                   | 0.00                               | 0.00                  | 0.00                  | 0.00                                 | 0.00                                 | 0.00                                | 0.00                               |
| 174.00                             | 0.83                       | 8.41                   | 173.99                             | 1.25                  | 0.18                  | 1.22                                 | 0.48                                 | 0.48                                | 0.00                               |
| <b>First SDI Surface MWD</b>       |                            |                        |                                    |                       |                       |                                      |                                      |                                     |                                    |
| 235.00                             | 1.58                       | 348.36                 | 234.98                             | 2.51                  | 0.08                  | 2.48                                 | 1.39                                 | 1.23                                | -32.87                             |
| 327.00                             | 3.87                       | 346.45                 | 326.87                             | 6.77                  | -0.90                 | 6.83                                 | 2.49                                 | 2.49                                | -2.08                              |
| 419.00                             | 5.80                       | 338.72                 | 418.54                             | 14.12                 | -3.32                 | 14.40                                | 2.21                                 | 2.10                                | -8.40                              |
| 510.00                             | 9.15                       | 346.81                 | 508.76                             | 25.45                 | -6.64                 | 26.03                                | 3.85                                 | 3.68                                | 8.89                               |
| 600.00                             | 11.26                      | 346.45                 | 597.33                             | 40.96                 | -10.33                | 41.85                                | 2.35                                 | 2.34                                | -0.40                              |
| 691.00                             | 13.45                      | 345.49                 | 686.21                             | 59.85                 | -15.07                | 61.14                                | 2.42                                 | 2.41                                | -1.05                              |
| 782.00                             | 15.74                      | 343.20                 | 774.27                             | 81.91                 | -21.29                | 83.75                                | 2.59                                 | 2.52                                | -2.52                              |

# Scientific Drilling International

## Survey Report

|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-05-51 - Slot A               |
| <b>Project:</b>  | Garfield County, CO NAD27 | <b>TVD Reference:</b>               | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Site:</b>     | Cascade Creek 697-08A Pad | <b>MD Reference:</b>                | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Well:</b>     | CC 697-05-51              | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | OH                        | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                        | <b>Database:</b>                    | Rockies Compass Server                   |

### Survey

| Measured Depth (ft)             | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N-S (ft) | +E-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---------------------------------|-----------------|-------------|---------------------|-----------|-----------|-----------------------|-----------------------|----------------------|---------------------|
| 873.00                          | 18.11           | 342.15      | 861.32              | 107.19    | -29.19    | 109.75                | 2.63                  | 2.60                 | -1.15               |
| 963.00                          | 18.73           | 348.12      | 946.72              | 134.65    | -36.45    | 137.84                | 2.21                  | 0.69                 | 6.63                |
| 1,058.00                        | 18.91           | 355.33      | 1,036.65            | 164.93    | -40.85    | 168.41                | 2.45                  | 0.19                 | 7.59                |
| 1,152.00                        | 20.58           | 356.74      | 1,125.13            | 196.60    | -43.03    | 200.14                | 1.85                  | 1.78                 | 1.50                |
| 1,247.00                        | 23.39           | 357.09      | 1,213.21            | 232.11    | -44.93    | 235.64                | 2.96                  | 2.96                 | 0.37                |
| 1,342.00                        | 26.73           | 357.27      | 1,299.25            | 272.30    | -46.91    | 275.80                | 3.52                  | 3.52                 | 0.19                |
| 1,436.00                        | 29.02           | 358.32      | 1,382.34            | 316.21    | -48.58    | 319.63                | 2.49                  | 2.44                 | 1.12                |
| 1,531.00                        | 32.10           | 359.20      | 1,464.14            | 364.49    | -49.61    | 367.74                | 3.28                  | 3.24                 | 0.93                |
| 1,625.00                        | 31.13           | 356.03      | 1,544.19            | 413.71    | -51.64    | 416.88                | 2.05                  | -1.03                | -3.37               |
| 1,720.00                        | 28.49           | 352.26      | 1,626.62            | 460.67    | -56.40    | 464.08                | 3.41                  | -2.78                | -3.97               |
| 1,814.00                        | 26.82           | 353.75      | 1,709.88            | 503.97    | -61.73    | 507.70                | 1.92                  | -1.78                | 1.59                |
| 1,909.00                        | 26.64           | 355.68      | 1,794.73            | 546.52    | -65.66    | 550.42                | 0.93                  | -0.19                | 2.03                |
| 2,004.00                        | 27.44           | 358.06      | 1,879.35            | 589.63    | -68.01    | 593.53                | 1.42                  | 0.84                 | 2.51                |
| 2,098.00                        | 27.35           | 355.24      | 1,962.81            | 632.80    | -70.53    | 636.72                | 1.38                  | -0.10                | -3.00               |
| 2,193.00                        | 28.49           | 350.85      | 2,046.76            | 676.92    | -75.95    | 681.17                | 2.47                  | 1.20                 | -4.62               |
| 2,287.00                        | 28.49           | 351.99      | 2,129.37            | 721.26    | -82.64    | 725.97                | 0.58                  | 0.00                 | 1.21                |
| 2,382.00                        | 27.79           | 353.84      | 2,213.15            | 765.71    | -88.17    | 770.76                | 1.18                  | -0.74                | 1.95                |
| 2,476.00                        | 29.11           | 353.93      | 2,295.79            | 810.24    | -92.94    | 815.54                | 1.40                  | 1.40                 | 0.10                |
| 2,571.00                        | 29.37           | 355.77      | 2,378.69            | 856.45    | -97.10    | 861.93                | 0.98                  | 0.27                 | 1.94                |
| 2,663.00                        | 28.67           | 358.50      | 2,459.14            | 901.01    | -99.34    | 906.47                | 1.63                  | -0.76                | 2.97                |
| <b>Last SDI Surface MWD</b>     |                 |             |                     |           |           |                       |                       |                      |                     |
| 2,771.00                        | 28.29           | 359.25      | 2,554.07            | 952.50    | -100.36   | 957.76                | 0.48                  | -0.35                | 0.69                |
| <b>First SDI Production MWD</b> |                 |             |                     |           |           |                       |                       |                      |                     |
| 2,866.00                        | 31.65           | 358.73      | 2,636.36            | 999.94    | -101.20   | 1,005.01              | 3.55                  | 3.54                 | -0.55               |
| 2,961.00                        | 31.37           | 356.28      | 2,717.35            | 1,049.54  | -103.36   | 1,054.54              | 1.38                  | -0.29                | -2.58               |
| 3,055.00                        | 27.18           | 352.30      | 2,799.34            | 1,095.25  | -107.83   | 1,100.47              | 4.91                  | -4.46                | -4.23               |
| 3,150.00                        | 26.78           | 352.81      | 2,884.00            | 1,137.99  | -113.41   | 1,143.56              | 0.49                  | -0.42                | 0.54                |
| 3,244.00                        | 27.07           | 356.26      | 2,967.81            | 1,180.35  | -117.46   | 1,186.11              | 1.69                  | 0.31                 | 3.67                |
| 3,339.00                        | 27.05           | 357.34      | 3,052.41            | 1,223.49  | -119.87   | 1,229.26              | 0.52                  | -0.02                | 1.14                |
| 3,433.00                        | 31.52           | 356.39      | 3,134.38            | 1,269.39  | -122.41   | 1,275.16              | 4.78                  | 4.76                 | -1.01               |
| 3,528.00                        | 32.27           | 354.28      | 3,215.04            | 1,319.41  | -126.50   | 1,325.33              | 1.41                  | 0.79                 | -2.22               |
| 3,622.00                        | 30.69           | 355.68      | 3,295.20            | 1,368.30  | -130.81   | 1,374.40              | 1.85                  | -1.68                | 1.49                |
| 3,717.00                        | 31.92           | 352.43      | 3,376.38            | 1,417.38  | -135.95   | 1,423.74              | 2.20                  | 1.29                 | -3.42               |
| 3,811.00                        | 29.46           | 351.90      | 3,457.21            | 1,464.91  | -142.48   | 1,471.70              | 2.63                  | -2.62                | -0.56               |
| 3,905.00                        | 28.75           | 354.98      | 3,539.34            | 1,510.31  | -147.71   | 1,517.41              | 1.76                  | -0.76                | 3.28                |
| 4,000.00                        | 30.60           | 352.78      | 3,621.88            | 1,557.07  | -152.75   | 1,564.43              | 2.26                  | 1.95                 | -2.32               |
| 4,094.00                        | 31.22           | 354.19      | 3,702.53            | 1,605.04  | -158.23   | 1,612.71              | 1.01                  | 0.66                 | 1.50                |
| 4,189.00                        | 33.68           | 355.77      | 3,782.69            | 1,655.81  | -162.66   | 1,663.66              | 2.74                  | 2.59                 | 1.66                |
| 4,283.00                        | 33.33           | 356.21      | 3,861.07            | 1,707.57  | -166.29   | 1,715.51              | 0.45                  | -0.37                | 0.47                |
| 4,377.00                        | 31.57           | 356.74      | 3,940.39            | 1,757.91  | -169.40   | 1,765.89              | 1.90                  | -1.87                | 0.56                |
| 4,472.00                        | 32.45           | 358.41      | 4,020.95            | 1,808.22  | -171.52   | 1,816.12              | 1.31                  | 0.93                 | 1.76                |
| 4,567.00                        | 31.48           | 358.23      | 4,101.54            | 1,858.49  | -172.99   | 1,866.25              | 1.03                  | -1.02                | -0.19               |
| 4,661.00                        | 31.13           | 358.32      | 4,181.86            | 1,907.31  | -174.46   | 1,914.94              | 0.38                  | -0.37                | 0.10                |



# Scientific Drilling International

## Survey Report

|                  |                           |                                     |  |
|------------------|---------------------------|-------------------------------------|--|
| <b>Company:</b>  | OXY USA RMAT              | <b>Local Co-ordinate Reference:</b> | Well CC 697-05-51 - Slot A               |
| <b>Project:</b>  | Garfield County, CO NAD27 | <b>TVD Reference:</b>               | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Site:</b>     | Cascade Creek 697-08A Pad | <b>MD Reference:</b>                | GL 8401' & RKB 30' @ 8431.00ft (H&P Rig) |
| <b>Well:</b>     | CC 697-05-51              | <b>North Reference:</b>             | True                                     |
| <b>Wellbore:</b> | OH                        | <b>Survey Calculation Method:</b>   | Minimum Curvature                        |
| <b>Design:</b>   | OH                        | <b>Database:</b>                    | Rockies Compass Server                   |

### Survey

| Measured Depth (ft)        | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N-S (ft) | +E-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|----------------------------|-----------------|-------------|---------------------|-----------|-----------|-----------------------|-----------------------|----------------------|---------------------|
| 4,756.00                   | 28.14           | 358.94      | 4,264.42            | 1,954.26  | -175.60   | 1,961.74              | 3.16                  | -3.15                | 0.65                |
| 4,850.00                   | 25.24           | 359.11      | 4,348.40            | 1,996.48  | -176.32   | 2,003.77              | 3.09                  | -3.09                | 0.18                |
| 4,945.00                   | 23.30           | 359.20      | 4,435.00            | 2,035.52  | -176.90   | 2,042.64              | 2.04                  | -2.04                | 0.09                |
| 5,039.00                   | 20.93           | 357.97      | 4,522.08            | 2,070.89  | -177.75   | 2,077.90              | 2.57                  | -2.52                | -1.31               |
| 5,134.00                   | 17.94           | 355.42      | 4,611.65            | 2,102.44  | -179.52   | 2,109.45              | 3.27                  | -3.15                | -2.68               |
| 5,228.00                   | 15.65           | 353.84      | 4,701.64            | 2,129.48  | -182.04   | 2,136.60              | 2.48                  | -2.44                | -1.68               |
| 5,323.00                   | 18.03           | 351.20      | 4,792.56            | 2,156.75  | -185.66   | 2,164.11              | 2.63                  | 2.51                 | -2.78               |
| 5,417.00                   | 18.03           | 349.44      | 4,881.95            | 2,185.43  | -190.55   | 2,193.15              | 0.58                  | 0.00                 | -1.87               |
| 5,512.00                   | 17.32           | 355.16      | 4,972.47            | 2,213.98  | -194.44   | 2,221.95              | 1.97                  | -0.75                | 6.02                |
| 5,606.00                   | 16.44           | 355.68      | 5,062.42            | 2,241.18  | -196.62   | 2,249.23              | 0.95                  | -0.94                | 0.55                |
| 5,701.00                   | 15.30           | 358.14      | 5,153.79            | 2,267.12  | -198.04   | 2,275.17              | 1.39                  | -1.20                | 2.59                |
| 5,796.00                   | 13.89           | 1.13        | 5,245.73            | 2,291.05  | -198.23   | 2,298.97              | 1.68                  | -1.48                | 3.15                |
| 5,890.00                   | 11.70           | 359.29      | 5,337.39            | 2,311.86  | -198.12   | 2,319.65              | 2.37                  | -2.33                | -1.96               |
| 5,985.00                   | 9.67            | 358.41      | 5,430.74            | 2,329.47  | -198.46   | 2,337.19              | 2.14                  | -2.14                | -0.93               |
| 6,079.00                   | 8.53            | 359.11      | 5,523.55            | 2,344.33  | -198.79   | 2,352.00              | 1.22                  | -1.21                | 0.74                |
| 6,174.00                   | 7.03            | 0.61        | 5,617.68            | 2,357.19  | -198.84   | 2,364.78              | 1.59                  | -1.58                | 1.58                |
| 6,268.00                   | 4.40            | 358.32      | 5,711.20            | 2,366.55  | -198.88   | 2,374.09              | 2.81                  | -2.80                | -2.44               |
| 6,363.00                   | 3.17            | 343.47      | 5,805.99            | 2,372.71  | -199.74   | 2,380.31              | 1.65                  | -1.29                | -15.63              |
| 6,457.00                   | 2.29            | 1.13        | 5,899.89            | 2,377.08  | -200.44   | 2,384.73              | 1.28                  | -0.94                | 18.79               |
| 6,552.00                   | 1.93            | 357.00      | 5,994.82            | 2,380.57  | -200.49   | 2,388.21              | 0.41                  | -0.38                | -4.35               |
| 6,647.00                   | 1.23            | 345.05      | 6,089.79            | 2,383.16  | -200.83   | 2,390.81              | 0.81                  | -0.74                | -12.58              |
| 6,742.00                   | 1.23            | 327.73      | 6,184.76            | 2,385.00  | -201.64   | 2,392.74              | 0.39                  | 0.00                 | -18.23              |
| 6,836.00                   | 0.62            | 304.27      | 6,278.75            | 2,386.14  | -202.60   | 2,393.97              | 0.75                  | -0.65                | -24.96              |
| 6,931.00                   | 0.79            | 280.27      | 6,373.75            | 2,386.55  | -203.67   | 2,394.49              | 0.35                  | 0.18                 | -25.26              |
| 7,025.00                   | 0.79            | 233.34      | 6,467.74            | 2,386.28  | -204.82   | 2,394.35              | 0.67                  | 0.00                 | -49.93              |
| 7,120.00                   | 1.06            | 220.86      | 6,562.72            | 2,385.22  | -205.93   | 2,393.42              | 0.35                  | 0.28                 | -13.14              |
| 7,214.00                   | 1.23            | 222.88      | 6,656.71            | 2,383.83  | -207.18   | 2,392.17              | 0.19                  | 0.18                 | 2.15                |
| 7,309.00                   | 1.32            | 223.50      | 6,751.68            | 2,382.28  | -208.63   | 2,390.80              | 0.10                  | 0.09                 | 0.65                |
| 7,403.00                   | 0.62            | 171.03      | 6,845.67            | 2,381.00  | -209.29   | 2,389.59              | 1.13                  | -0.74                | -55.82              |
| 7,498.00                   | 0.35            | 157.14      | 6,940.67            | 2,380.22  | -209.10   | 2,388.80              | 0.31                  | -0.28                | -14.62              |
| 7,592.00                   | 0.53            | 200.29      | 7,034.66            | 2,379.55  | -209.14   | 2,388.14              | 0.39                  | 0.19                 | 45.90               |
| 7,687.00                   | 0.79            | 284.14      | 7,129.66            | 2,379.30  | -209.93   | 2,387.97              | 0.95                  | 0.27                 | 88.26               |
| 7,781.00                   | 1.41            | 313.14      | 7,223.64            | 2,380.25  | -211.40   | 2,389.08              | 0.87                  | 0.66                 | 30.85               |
| 7,876.00                   | 1.67            | 333.80      | 7,318.61            | 2,382.29  | -212.86   | 2,391.27              | 0.64                  | 0.27                 | 21.75               |
| 7,971.00                   | 1.41            | 324.92      | 7,413.57            | 2,384.49  | -214.15   | 2,393.59              | 0.37                  | -0.27                | -9.35               |
| 8,065.00                   | 1.67            | 299.52      | 7,507.54            | 2,386.11  | -216.00   | 2,395.41              | 0.77                  | 0.28                 | -27.02              |
| 8,160.00                   | 1.49            | 306.55      | 7,602.51            | 2,387.53  | -218.20   | 2,397.06              | 0.28                  | -0.19                | 7.40                |
| 8,259.00                   | 1.06            | 326.68      | 7,701.48            | 2,389.06  | -219.74   | 2,398.75              | 0.62                  | -0.43                | 20.33               |
| 8,349.00                   | 0.70            | 311.12      | 7,791.47            | 2,390.11  | -220.61   | 2,399.89              | 0.48                  | -0.40                | -17.29              |
| 8,443.00                   | 0.88            | 262.70      | 7,885.46            | 2,390.40  | -221.76   | 2,400.30              | 0.71                  | 0.19                 | -51.51              |
| 8,471.56                   | 1.08            | 268.44      | 7,914.01            | 2,390.36  | -222.24   | 2,400.32              | 0.79                  | 0.71                 | 20.09               |
| <b>CC 697-05-51 Target</b> |                 |             |                     |           |           |                       |                       |                      |                     |
| 8,538.00                   | 1.58            | 275.88      | 7,980.44            | 2,390.44  | -223.78   | 2,400.57              | 0.79                  | 0.75                 | 11.20               |
| 8,632.00                   | 2.37            | 262.34      | 8,074.38            | 2,390.32  | -227.00   | 2,400.79              | 0.97                  | 0.84                 | -14.40              |

# Scientific Drilling International

## Survey Report

**Company:** OXY USA RMAT  
**Project:** Garfield County, CO NAD27  
**Site:** Cascade Creek 697-08A Pad  
**Well:** CC 697-05-51  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well CC 697-05-51 - Slot A  
**TVD Reference:** GL 8401' & RKB 30' @ 8431.00ft (H&P Rig)  
**MD Reference:** GL 8401' & RKB 30' @ 8431.00ft (H&P Rig)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Rockies Compass Server

### Survey

| Measured Depth (ft)                                   | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 8,727.00  | 2.29            | 275.35      | 8,169.31            | 2,390.23   | -230.84    | 2,401.13              | 0.56                  | -0.08                | 13.69               |
| 8,821.00  | 3.17            | 277.37      | 8,263.20            | 2,390.74   | -235.28    | 2,402.12              | 0.94                  | 0.94                 | 2.15                |
| 8,916.00  | 3.78            | 273.59      | 8,358.02            | 2,391.27   | -241.01    | 2,403.28              | 0.69                  | 0.64                 | -3.98               |
| 9,010.00  | 3.87            | 262.87      | 8,451.82            | 2,391.07   | -247.25    | 2,403.77              | 0.77                  | 0.10                 | -11.40              |
| 9,105.00  | 4.40            | 256.10      | 8,546.57            | 2,389.80   | -253.97    | 2,403.24              | 0.76                  | 0.56                 | -7.13               |
| 9,199.00  | 4.66            | 250.65      | 8,640.28            | 2,387.67   | -261.07    | 2,401.90              | 0.53                  | 0.28                 | -5.80               |
| 9,294.00  | 5.28            | 253.55      | 8,734.92            | 2,385.15   | -268.91    | 2,400.25              | 0.70                  | 0.65                 | 3.05                |
| 9,328.00  | 4.75            | 249.95      | 8,768.79            | 2,384.23   | -271.73    | 2,399.64              | 1.81                  | -1.56                | -10.59              |
| <b>Last SDI Production MWD</b>                        |                 |             |                     |            |            |                       |                       |                      |                     |
| 9,383.00  | 4.75            | 249.95      | 8,823.60            | 2,382.66   | -276.01    | 2,398.56              | 0.00                  | 0.00                 | 0.00                |
| <b>Projection to TD - BHL = 637043.27, 1225545.12</b> |                 |             |                     |            |            |                       |                       |                      |                     |

### Design Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                     |
|---------------------|---------------------|-------------------|------------|-----------------------------|
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                             |
| 174.00              | 173.99              | 1.25              | 0.18       | First SDI Surface MWD       |
| 2,663.00            | 2,459.14            | 901.01            | -99.34     | Last SDI Surface MWD        |
| 2,771.00            | 2,554.07            | 952.50            | -100.36    | First SDI Production MWD    |
| 9,328.00            | 8,768.79            | 2,384.23          | -271.73    | Last SDI Production MWD     |
| 9,383.00            | 8,823.60            | 2,382.66          | -276.01    | Projection to TD            |
| 9,383.00            | 8,823.60            | 2,382.66          | -276.01    | BHL = 637043.27, 1225545.12 |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_